

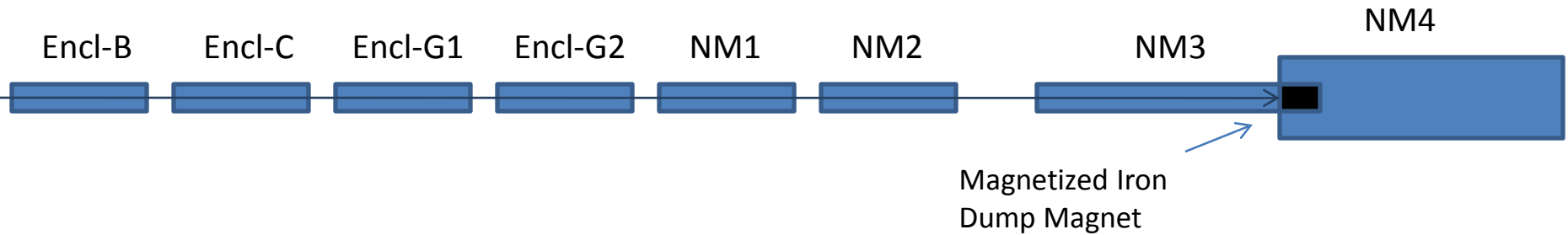
Beam to [E906/SeaQuest](#) Status

cribbed from 3/22 All-Exp-Mtg

Collaboration Meeting

Chuck Brown – 5/27/10

Deliver 120 GeV protons to E906

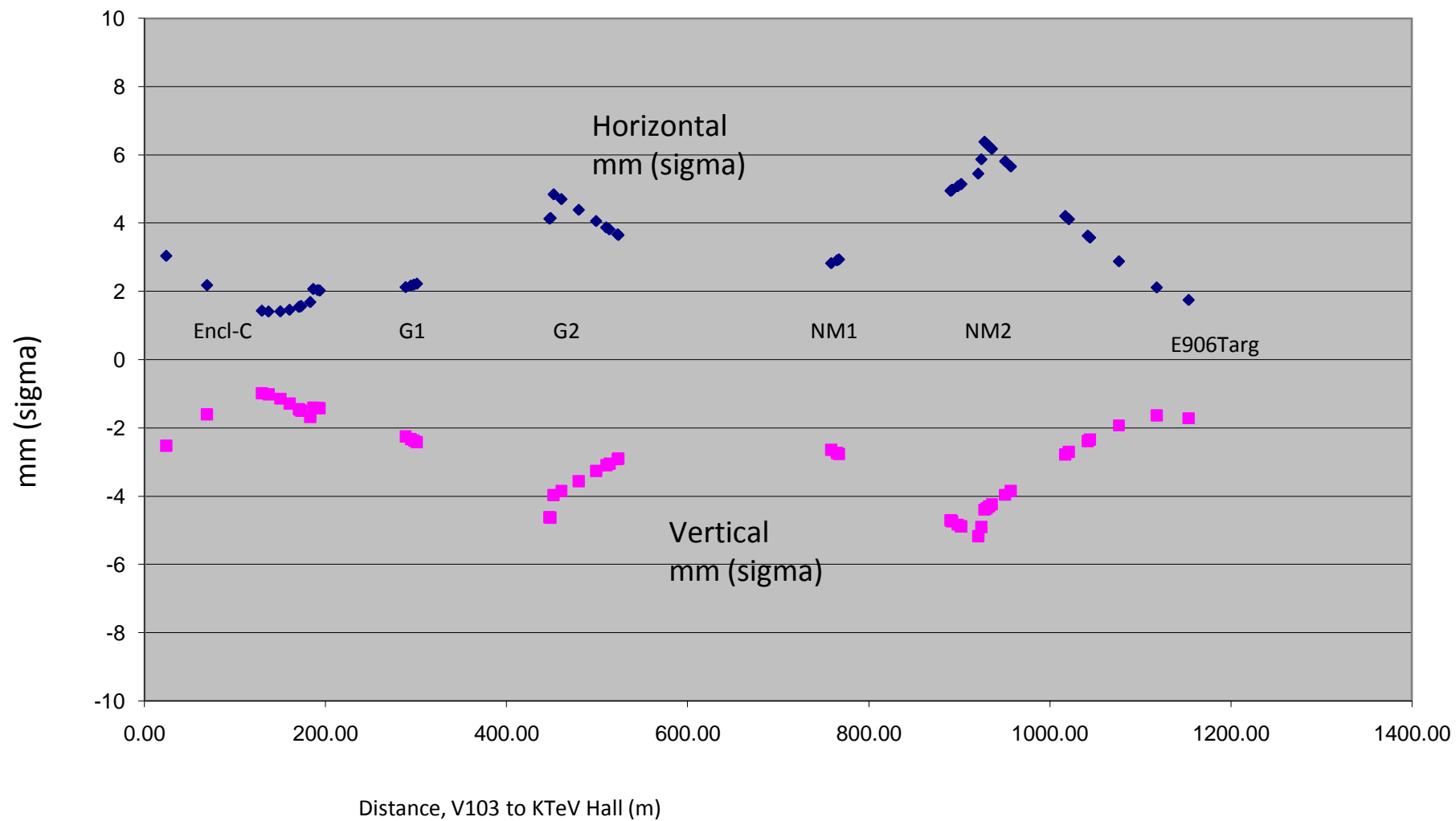


- Modify 800 GeV beam line to NM2 in order to transmit 120 GeV protons to NM4 (KTeV Hall).
 - Replace MUBEND cryomagnets in G2 with 6 renovated EPB dipoles
 - Reinstall V100 in Encl-C with 2 renovated EPB dipoles
 - Add a 3Q120 quad, Q105, in Encl-C
 - Remove kaon production target in NM2
 - Remove collimators and sweeper dipoles in NM2 and NM3

Beam Structure

- E906 requests 5 sec. of slow spill beam every 60 sec, at an intensity of $2 \times 10^{12}/\text{sec}$, total $1 \times 10^{13}/\text{minute}$
 - The experiment will start at low intensity to commission the detector
 - E906 may not be able to reach full intensity until after the Tevatron stops running due to losses in the P3 line

120 GeV beam envelope to KTeV Hall



Progress

- Beam Design, ChuckB, Tom Kobilarcik, Mike Geelhoed
 - TRANSPORT simulation of beam line with subsequent generation of detailed Beam Sheet (complete set of survey coordinates) is almost complete
- Magnet renovation, TD, Oliver Kiemsches
 - 14 EPB dipoles removed from Switchyard and sent to TD in February for renovation
 - Need 6 for MUBND (G2), final testing underway
 - 2 for V100 (Encl-C), already in Encl-C, ready for mounting
 - 2 3Q120 quads, in Encl-C, ready for mounting

Progress, cont.

- Mechanical, AD, Mike Petkus, PPD, John Voirin
 - G2, cleaned out and is ready for magnet installation
 - V100 in June? (MTest off)
 - G2 installation in late June?
 - PPD will modify NM2/NM3/NM4, already started
 - FMAG, the Dump Magnet is now assembled in NM4
- LCW, AD, Maurice Ball, Bob Slazyk
 - LCW systems in G2, N01, NM2/3/4 will be renovated, turned on and checked out in June?
 - FMAG will have LCW connected next week?

Progress, cont.

- Electrical, AD, Julius Lentz
 - Existing power supplies rehosed and checked
 - V100, Q105, G2 dipoles powered – in June?
 - New switcher supplies for trims needed?
 - NM3AN (FMAG, dump magnet) and NM4AN (KTeV/E906 analysis magnet) powered and tested – in June?
- Interlocks, AD, Chuck Worel
 - Upgrading interlocks in G2, NM1(N01) and NM2 proceeding; NM3 and NM4 to be renovated in April/May?
 - See document by Chuck Worel reviewing E906 interlocks

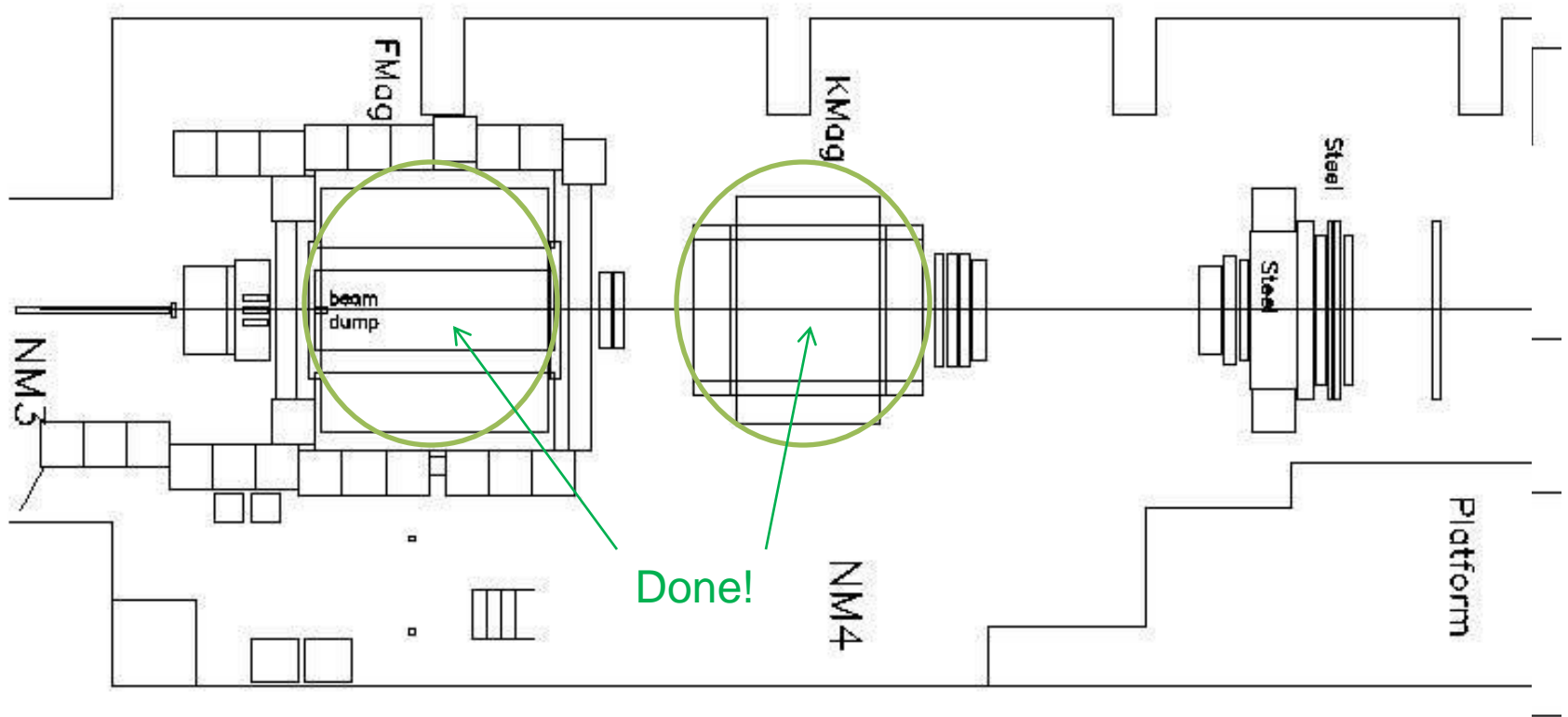
Progress, cont.

- Controls, AD, Mike Kuplic
 - Controls to N01, NS7, NM4 have been checked out
 - Solid target wheel for test run checked out, need targets?
- Instrumentation, AD, Gianni Tassoto
 - New SWIC controllers ordered, parts are in, need Internet in NS7.
 - SWICs are being renovated, all need testing?
- Shielding Safety Approval, AD, ChuckB, Mike Gerardi, Mike Geelhoed
 - Need to update KTeV shielding assessment, SAD?

Goal (as stated on 3/22 to All Experimenter meeting)

- A short, low intensity, beam test before summer shutdown.
 - On 3/8/10, Paul Reimer presented the E906 status to the All-Exp-Mtg and reported E906 will have most of their detectors ready for a test run by late June. ????
- Problem:
 - We will need more engineering and tech help from AD than has been available so far (according to the Department Heads). – There has been some progress on this – beam in July is still probably a long shot unless more resources are made available!

Status of NM4



Status of NM4, cont.

- Beam Height has been determined by three factors.
 - Center of FMAG, 95.9" above floor
 - 120 GeV proton beam is angled downward at 0.155 mrad
 - Center of KMAG aperture, 95.5" above floor
- **Decision, mount all detectors 95.5" above floor.**
- Station 2 chambers need a 4" spacer to raise them up to about 95.5"
- Need to measure magnetic fields of FMAG and KMAG as soon as power is available, and the Sta2 frame is bolted down!

Proposed sequence for June in NM4

- Install upstream shielding for FMAG and target cave
- Install 4" shims on Sta2 chambers
- Measure FMAG/KMAG magnetic fields
- Return Sta2 Y/Y' chamber from Lab6
- Install Sta3/Sta4 iron wall
- Install Sta3/Sta4 support frame (need design)
- Finish FMAG shielding
- Finish NM3 4" beam pipe
- Remount Sta3- chambers
- Assemble first prop tube assembly
- Assemble first Sta3/Sta4 Hodo assembly
- Etc.

Collaboration Picnic

607 West Lane, Geneva

North on Kirk to Route 38
West thru Geneva to West Lane
North on West Lane to

Chuck and Mary Kay's house
2nd house in 2nd block,
630-232-7255

Show of hands??

